

Detailed Action

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

The primary reasons for allowance of the claims are the amendments to the claims for a glass substrate for an information recording media requiring a presence of BaO, K₂O, Na₂O and ZrO₂ in the context of also limiting the glass to a ratio $(Ca/(MgO+CaO+SrO+BaO)) \geq 0.5M\%$ and a total K₂O + Na₂O content between 2 to 5M%. Applicants have demonstrated the molar percentage amounts claimed as outside exemplified amounts taught in the prior art (re: 4 page attachment to applicants' 5/12/09 Remarks). Applicants have shown a high strength glass commensurate in scope to what has been claimed having improved resistance to heat and acid resistance evident in a resulting low alkali elution levels with at glass transition temperature claimed (instant Examples 1 to 4 and page 42 In 23 to 36 demonstrating a high resistance to acid resulting in an unobvious reduction in alkali precipitation subsequent to the formation of information recording disks. In an Interview with applicants' representative Arthur R. Crawford on June 16, 2009 it was agreed to amend the claims to require a molar percentage and correct antecedent bases for claim terms, cancel claims dependant on cancelled claims and have dependant claims further limit the claims which they depend.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Examiners Amendment

An examiner's amendment to the record appears below.

Rewrite claim 1 as:

A substrate for an information recording medium, which is formed of a glass containing, by mol%:

45 to 70% of SiO_2 , 1 to 15% of Al_2O_3 , total content of SiO_2 and Al_2O_3 being 57 to 85%;

2 to 25% of CaO , more than 0 but not more than 15% of BaO , 0 to 15% of MgO , 0 to 15% of SrO , 0 to 10 % of ZnO , total content of MgO , CaO , SrO , BaO and ZnO being 2 to 30%;

more than 0% but not more than 15% of K_2O , more than 0 but not more than 8% of Na_2O , total content of K_2O and Na_2O being 2 to 15%;

more than 0 but not more than 12% of ZrO_2 , 0 to 10% of TiO_2 , ratio of content of CaO to the total content of MgO , CaO , SrO and BaO ($\text{CaO}/(\text{MgO}+\text{CaO}+\text{SrO}+\text{BaO})$) is 0.5% or more,

the total content of SiO_2 , Al_2O_3 , MgO , CaO , SrO , BaO , ZnO , K_2O , Na_2O , ZrO_2 , TiO_2 components in the glass being at least 95%, the glass contains no Li_2O , and has a glass transition temperature (T_g) of 600°C or higher and an etching rate of 0.1/minute or less with regard to a hydrosilicofluoric acid aqueous solution maintained at a temperature of 45°C with the hydrosilicofluoric acid concentration 1.72% by weight.

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Amend claim 5:

On line 3 of claim 5 delete

"2 to 25 % CaO,"

On line 4 of claim 5 delete

"more than 0 % but not more than 15 % of K₂O , 0 to 3% of Li₂O"

On the last line of claim, 5 rewrite "95 %" as

-- 95 mol % - -

Amend claim 7:

On the last line of claim, 7 rewrite "95 %" as

-- 95 mol % - -

Cancel claim 12.

Cancel claim 13.

Amend claim 19:

On lines 3 to 4 rewrite "0 to 14 % of BaO" as

- - more than 0 but not more than 14% of BaO - -

Amend claim 19:

On line 4 rewrite "0 to 10 % of SrO" as

-- more than 0 but not more than 10% of SrO --

On line 5 rewrite "0 to 5 % of Na₂O" as

-- more than 0 but not more than 5% of Na₂O --

On the last line rewrite "0 to 10 % of ZrO₂" as

-- more than 0 but not more than 10 % of ZrO₂ --

Authorization for this examiner's amendment was given in a telephone interview with Arthur R. Crawford on 06/18/09.

Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Conclusion

The claims are 1, 4, 5, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17 and 19.

- All claims have been allowed.

INQUIRES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis Falasco, whose telephone number is (571)272-1507. The examiner can normally be reached on M-F 10:30 - 7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, Kevin Bernatz can be reached at (571)272-1505. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/L.F./
Examiner, Art Unit 1794

/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art Unit 1794